2013 Annual Drinking Water Quality Report

NORTH ANDOVER WATER DEPARTMENT

PWS ID #3210000

NORTH ANDOVER WATER TREATMENT PLANT

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CONTACTS

Linda Hmurciak
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HOURS

Summer: 5:00am to 9:00pm
Winter: 6:00am to 6:30pm
Weekends: 6:00am to 6:00pm

INSIDE THIS ISSUE:

Quality Matters

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2013. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. It is always our utmost importance that we are delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. Please share with us your thoughts or concerns about the information in this report. After all, well-informed customers are our best allies.

Finally, in our efforts to become more "green" this and all future water quality reports will be available on the Town's website for review and a paper copy will be sent to anyone requesting one. This should save the Town the expense of printing and mailing over 11,000 copies of the reports. If you would like a printed copy or if you have any questions or comments regarding our report, please email **Julie Greenwood-Giglio, Lab Director, at jgiglio@townofnorthandover.com or call her at (978) 688-9574.**

Community Participation

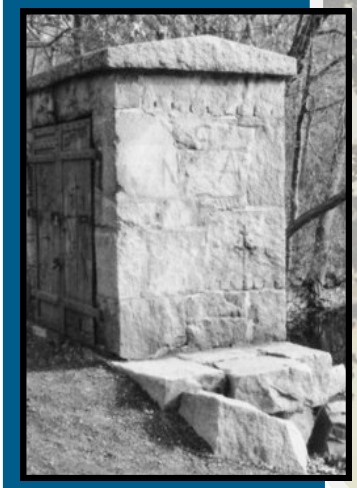
The public is encouraged to participate and make comments on concerns about the town water system. We would also like to invite you to participate in issues concerning your drinking water and source by attending Town Meetings, along with Board of Selectmen, Board of Health and Planning Board meetings. Times, dates and locations are continuously posted on the Town's website at: **www.townofnorthandover.com.**

Also, please be vigilant while enjoying the lake and report any suspicious activity immediately to the **Police Department at (978) 683-3168**.

Be Green and Drink Local

Tap water is delivered straight to your faucet without trucking or plastic waste. Bottled water produces over 10,000 times the amount of greenhouse gases compared to tap water. The environmental impacts from a primary consumption of bottled water are astronomical. Is bottled water any better than the water that comes straight from your tap here in North Andover? Though labels claim that their water comes from fresh mountain springs, 25-40 percent actually comes directly from municipal water sources—in other words….it's the same water coming out of your tap, and you already paid for it. In addition, the Federal Drug Administration (FDA) monitors bottled water quality, while EPA monitors the municipal source. Tap water is highly regulated and tested by government-certified labs. However the same requirements for bottled water companies do not exist. They don't have to list the source, purification methods, or chemical pollutants, so really there's no telling what you're drinking. In order to ensure that tap water is safe to drink, the Massachusetts DEP and EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water system. For more information on this topic check out the **Natural Resources Defense Council (NRDC) study results at: www.nrdc.org/water/drinking/bw/exesum.asp.**

Where Your Drinking Water Comes From



With the exception of a scattering of private wells, North Andover's drinking water primarily comes from Lake Cochichewick. It is considered a "surface" source. The lake has a length of 2.65 miles and a width just under 3/4 of a mile with 7.35 miles of shoreline. The maximum water depth of the lake is approximately 45 feet, with an average depth of 23 feet. The watershed, which in essence is an extension of the lake, has an area of approximately 2,732 acres that drains toward the lake from runoff, springs, and brooks. The lake holds approximately 4.3 billion gallons of water.

The treatment plant pumps roughly 1.1 billion gallons of water every year from the lake for the treatment process, fire protection and for the delivery of clean, safe drinking water to the town. We pump on average 3.2 million gallons per day (MGD), with our high average in the summer months of 6.5—7.0 MGD. This dramatic increased stress on our water supply is mostly caused by non-essential water use such as lawn irrigation.

To help with our conservation efforts during the hot summer months try watering your lawns and gardens before 8 AM and after 6PM, check your sprinkler heads for leaks and make sure that you have rain sensors installed to shut down sprinklers during rainy days, and mulch. Using organic mulch around plants could save you hundreds of gallons per year by reducing evaporation.

Lake Cochichewick—Your Drinking Water Reservoir

PERMISSIBLE ACTIVITIES

Passive Recreation: Walking, Hiking, Jogging, and Biking
Fishing: From Shoreline or Boats that are designed to be manually propelled by oars or paddles. Electric motors are acceptable as an alternate form of propulsion. Max length of a motorized craft is 15ft. Must have a valid state license.
Boating: Rowing shells, johnboats, rowboats, canoes and kayaks are acceptable as long as the occupants are isolated from contact with the lake.

DOMESTIC ANIMALS ARE NOT ALLOWED IN CRAFT or ON THE ICE

RESTRICTED ACTIVITIES
(All are fineable offenses)

No Littering. All supplies and debris that is carried in must be carried off.
No Swimming, **Bathing**, or **Wading**
No Hip Waders shall be worn—fish from shore or boat **only.**
No Windsurfers or **Paddleboards**
No Gasoline/Diesel powered engines for anything that uses fuel such as, but not limited to: boats, snowmobiles, ice augers, stoves, lamps.
No dogs or any other domestic animal allowed in the water for any reason.
***The Town of North Andover has a leash law for all dogs and the open space and recreation areas are NOT exempt**

The North Andover Water Treatment Plant Process

Ozone generator room

We are proud of the exceptional quality of water that flows to your household or business daily. We treat the water with great care here at the treatment plant to enhance its quality. We are fortunate to have such clean source water. The Water Treatment Plant is a conventional filtration plant, which includes **ozonation**, **coagulation**, **flocculation**, and **sedimentation**. The treatment process consists of a series of physical and chemical steps designed to produce a safe and consistent quality product.

First, untreated water is pumped from Lake Cochichewick into the plant and sent to the **ozone** contact chamber. Ozone gas is generated on-site, and is used as a strong oxidant and disinfectant, breaking down organic matter making the water easier to filter.

From there water enters a mixing chamber where the coagulant, **poly-aluminum chloride** is added to aid in the formation of floc. This processes known as **coagulation** and **flocculation** is needed to make small particles stick together so that they become large enough to settle out during the next process in treatment called **sedimentation**.

The water that is now clearer of the removed particles then flows into the **Carbon Filters**. North Andover has eight deep bed dual granular activated carbon (GAC) and sand filters. These filters remove any remaining impurities . The filtered or "finished" water is then sent to the **clear-well** which holds 620,000 gallons and is located under the plant. To complete purification, **sodium hypochlorite** is added for disinfection to the filter effluent. **Sodium Hydroxide** is also added for pH control adjustment. **Fluoride** is added to the finished water at about 1ppm to prevent tooth decay and cavities. As a final step, **Zinc Orthophosphate**, a corrosion inhibitor, is added as the water leaves the plant to protect the linings of the distribution system pipes. From there, treated water is pumped into North Andover's water distribution system. The plant is equipped with four finish water pumps, with a pumping capacity of 12 million gallons per day.

Pipe gallery

Filter gallery

At that point when water leaves the treatment plant, it is safe, odorless, colorless and tasteless. The water is then pumped through the distribution system to two sanitized 2.2 million gallon in-ground storage tanks and into a one million gallon stand pipe and into your homes and businesses.

To ensure you that we are providing the highest quality of water available, your water system is operated by Massachusetts certified operators who oversee the routine operations of our system. The water quality is constantly monitored by us, in our on-site laboratory, and by the **MassDEP** to determine effectiveness of existing water treatment and to determine if any addition treatment is required.

Bradford Standpipe, one of three drinking water storage tanks.

Stormwater = NPDES

Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating "point sources" that discharge pollutants into waters of the United States.

Point sources are often discrete conveyances such as pipes or man-made ditches or drains (catch basins) that direct "stormwater" to a surface source. Stormwater runoff is generated when precipitation from rain and snowmelt events flows over land or impervious surfaces (paved streets, parking lots, and building rooftops), and does not percolate into the ground. As the runoff flows over the land and impervious surfaces it accumulates debris, chemicals, sediment or other pollutants that could adversely affect water quality if the runoff is discharged untreated into our lake or tributaries.

Federal and state laws and regulations require municipalities with a storm drain system to manage and control all stormwater discharges in their towns and they, along with everyone who wants to discharge any type of water with pollutants, must first obtain an NPDES permit to do so.

If you see a suspicious discharge to a body of water or storm drain (catch basin, slotted manhole, etc.), please contact **North Andover's Conservation Commission at (978) 688-9530**.

Stormwater tips:

1. Don't dump anything into storm drains. Dispose of hazardous waste through North Andover's ongoing waste oil collection program and bi-annual hazardous waste collection days.
2. When watering your lawn, don't over water. Water that runs off sidewalks and roadways carries contaminants (oil, grease, and metals) into our storm drain system.
3. Divert runoff from pavement to grassy, planted, or wooded areas of your property.
4. Reduce fertilizer and pesticide use.
5. Sweep up salt and sand on your walkways after snowmelt. Don't hose down driveways or sidewalks.
6. Inspect your vehicles and equipment for leaking and damaged parts.

Source Water Assessment Plan

In 2004, the Department of Environmental Protection (DEP) completed an assessment of all the water supplies in Massachusetts. Out of this assessment, they created a plan for each community called a Source Water Assessment Plan (SWAP). The purpose of this SWAP was to determine the susceptibility of each drinking water source to potential sources of contamination.

According to the SWAP, our water system had a susceptibility rating of **high**, due to reasons such as commercial businesses, residential septic systems, underground fuel storage tanks, a golf course and farm activity, all within our watershed, to name a few. It is important to understand that these susceptibility ratings do not imply poor water quality but rather the supply's potential to become contaminated by activities within the watershed. Protecting our watershed is our first line of defense in protecting our drinking water. The complete SWAP report is available online at www.townofnorthandover.com/ water – "Lake & Watershed Information." For more information, please contact **Julie Greenwood-Giglio at (978) 688 9574.**

Harmful Aquatic Hitchhikers : Zebra Mussel

Zebra mussels get their name from the striped pattern on their shells. They can grow to a maximum length of about 50mm and live for to five years. As a native to Russia, zebra mussels were introduced into the Great Lakes in 1985 or 1986, when one or more transoceanic ships discharged ballast water into Lake St. Clair.

The zebra mussel attaches to hard surfaces located at moderate depths. This affinity for hard surfaces has made water intake structures, like those used for municipal water treatment plants, susceptible to colonization. Since 1989, some plants located in areas of extensive zebra mussel colonization have reported significant reductions in pumping capabilities and occasional shutdowns.

These hitchhikers can spread to other inland waters either in their immature form known as "veligers" transported in water or as adults attached to aquatic weeds, boat surfaces or any other surfaces. Veligers are small (about the size of the period at the end of this sentence) and may be able to survive in any residual water source.

Adult mussels are very hardy and can survive out of water for extended periods depending upon temperature, humidity, wind, and sunlight. Maximum out-of-water survival time in ideal conditions is about 10 days for adults and 3 days for newly-settled juveniles.

"Maximum out-of-water survival time in ideal conditions is about 10 days for adults and 3 days for newly-settled juveniles."

How to prevent the spread of Zebra Mussels?

* Remove any visible vegetation from items that were in the water, including the boat, trailer, and all equipment after leaving any water body.
* Do not re-use bait if exposed to infested waters. Thoroughly clean floats and bobbers.
* Dry boat and other equipment for at least 48 hours before using in uninfested waters.

2013 Sampling Results

Water Quality Data

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

2013 Water Quality Data from the North Andover Water Department and Distribution System

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCLG	MCL	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	MAJOR SOURCE
REGULATED SUBSTANCES							
Chlorine (ppm)	2013	4	4	1.00	.11 - 1.08	NO	Water additive used to control microbes
Fluoride (ppm)	2013	4	4	1.00	0.80 - 1.26	NO	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Haloacetic acids [HAA] (ppb)	2013	N/A	60	5.8	1.9 - 8.8	NO	Byproduct of drinking water disinfection
Nitrate (ppm)	2013	10	10	0.15	N/A	NO	Runoof from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs[Total Trihalomethanes] (ppb)	2013	N/A	80	26.1	12.2 - 43.1	NO	Byproduct of drinking water disinfection
Total Organic Carbon (% removal)	2013	N/A	TT	50	41-61	NO	Naturally present in the environment
Turbidity[1] (NTU)	2013	N/A	TT	0.16	0.04-0.17	NO	Soil runoff
Turbidity (Lowest monthly % of samples meeting limit)	2013	N/A	TT	100%	N/A	NO	Soil runoff

[1]Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90th %tile)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	MAJOR SOURCE
Copper[2] **(ppm)**	2011	1.3	1.3	0.077	0/30	NO	Corrosion of household plumbing systems; Erosion of natural deposits
Lead[2] **(ppm)**	2011	15	0	1.7	0/30	NO	Corrosion of household plumbing systems; Erosion of natural deposits

[2]The town is only required to test for lead and copper every three years due to the non-existent and extremely low levels found at our taps. Tap water samples were collected for lead and copper analysis throughout the community. Samples are scheduled to be collected the summer of 2014 and will be reported in next years water report.

Averages of Common Parameters

pH: 7.6

Sodium: 26 ppm

Iron: 0.00 ppm

Manganese: 0.01 ppm

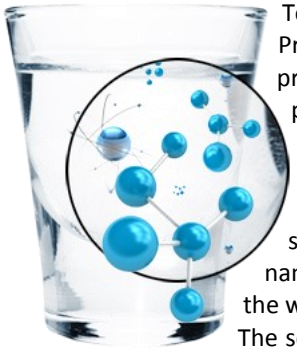
Bacteria: Negative

Hardness: 30 ppm or 1.8 grains per gallon (soft water)

Definitions

- **90th Percentile**: Out of every 10 homes sampled, 9 were at or below this level.
- **AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements
- which a water system must follow.
- **MCL (Maximum Contaminant Level):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **MCLG (Maximum Contaminant Level Goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **MRDL (Maximum Residual Disinfectant Level):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **MRDLG (Maximum Residual Disinfectant Level Goal):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **NA:** Not available
- **NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).
- **ppm (parts per million):** One part substance per million parts water (or milligrams per liter).
- **TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.

Substances that Could Be in Our Source Water



To ensure that tap water is safe to drink, the Department of Environmental Protection (DEP) and the U.S. Environmental Protection Agency (U.S. EPA) prescribe regulations limiting the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

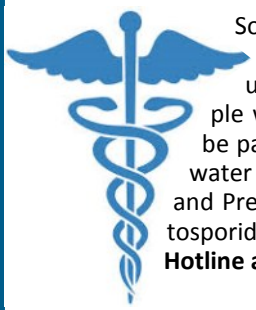
Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations or wildlife;

- **Inorganic Contaminants,** such as salts and metals, which can be naturally occurring or may result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming;

- **Pesticides and Herbicides,** which may come from a variety of sources, such as agriculture, urban storm water runoff and residential uses;
- **Organic Chemical Contaminants,** including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and which may also come from gas stations, urban storm water runoff and septic systems;
- **Radioactive Contaminants,** which can be naturally occurring or may be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the **U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.**

Important Health Information



Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the **Safe Drinking Water Hotline at (800) 426-4791 or http://water.epa.gov/drink/hotline.**

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the **Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.**

NOTE AUGUST 2014—The Town of North Andover is scheduled for Lead and Copper testing. Look for results in the 2014 Annual Water Report

Benefits of Community Water Fluorination (CWF)

Fluoride is one of the world's most studied substances. Thousands of studies have been conducted over the past 60 years to establish and confirm fluoride's benefits:

- Fluoride is nature's cavity fighter.
- Fluoride is safe. Countless studies have been conducted proving fluoride's safety.
- Fluoride is inexpensive. It costs between $.50 to $3.00 per capita per year to fluoridate community's water supply. Every dollar spent on CWF saved $38 in dental restoration costs.
- Benefits everyone in fluoridated communities—regardless of age and socioeconomic status.

What are PPCPs?

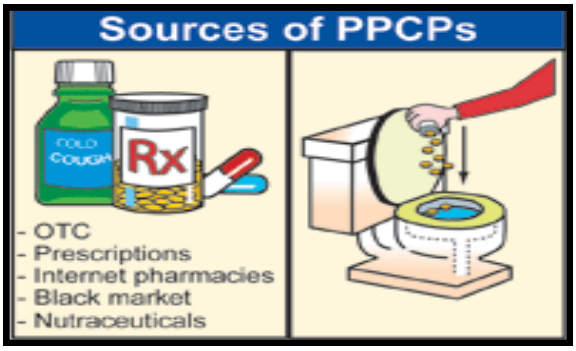
Pharmaceuticals and personal care products were first called "PPCPs" only a few years ago, but these bioactive chemicals (substances that have an effect on living tissue) have been around for decades. Their effect on the environment is now recognized as an important area of research. Some PPCPs are easily broken down and processed by the human body or degrade quickly in the environment, but others are not easily broken down and processed, so they enter domestic sewers . PPCPs dissolve easily and don't evaporate at normal temperatures or pressure, PPCPs make their way into the soil and into aquatic environments via sewage, treated sewage sludge (biosolids), and irrigation with reclaimed water.

PPCPs include:

- Prescription and over-the counter therapeutic drugs
- Veterinary drugs
- Fragrances
- Cosmetics
- Sun-screen products
- Diagnostic agents
- Nutraceuticals (e.g., vitamins)

Sources of PPCPs:

- Human activity
- Residues from pharmaceutical manufacturing (well defined and controlled)
- Residues from hospitals
- Illicit drugs
- Veterinary drug use, especially antibiotics and steroids
- Agribusiness



DO NOT FLUSH DOWN SINK OR TOILET

The best and most cost-effective way to ensure safe water at the tap is to keep our source waters clean. Never flush unused medications down the toilet or sink. For disposal of non-liquid medications, bring them to the Police Station, or call your local pharmacy where you bought them. You can contact the Health Department at (978) 688 9540 for further information or you can go on the web at www.Earth911.com.

Animal Waste and Water Quality

Animal waste is one of the many sources of pollution that can add up to big problems for water quality and may cause health problems as well. While most people connect animal waste problems to agriculture, studies have shown that pets, waterfowl, and other animal waste can cause significant water pollution problems.

Animal waste contains several types of pollutants that contribute to water quality problems: nutrients, pathogens and naturally toxic material, ammonia. When animal waste ends up in a pond, stream, or more importantly Lake Cochichewick, it decomposes, using up oxygen and releasing it pollutants into the water. During summer months when the water is warm, the combination of low oxygen levels and ammonia can kill fish and other aquatic organisms. The nutrients cause excessive growth of aquatic weeds and algae.

Pathogens the disease causing bacteria and viruses associated with animal waste, can also make water unsafe for human use. If pathogens or the indicator bacteria associated with animal waste are found during water testing Stevens Pond may be closed to swimming and Lake Cochichewick may require expensive means to remedy the issue.

Fortunately, there are some simple practices everyone can do to help prevent pollution by keeping animal waste out of the water. While it may seem easier to ignore the problem of animal waste, remember that you are protecting not only the environment but also your own health.

When nature calls, make sure you pick it up!

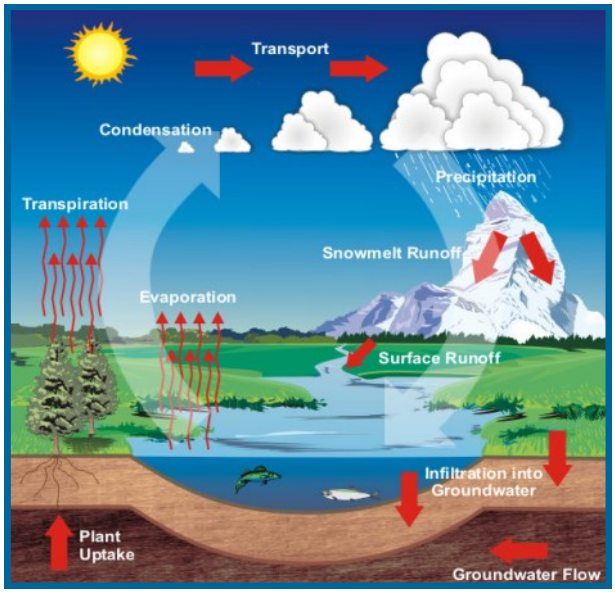
Keeping Animal Waste Out of Our Water

1.**Pick up after your pet**. Believe it or not preventing water pollution can be as simple as remembering to bring along a plastic bag when you walk your dog. Dispose of the waste in a trash receptacle. Bagging the waste and leaving it does not constitute as cleaning up after your pet.

2. **Don't feed waterfowl**. While one of the pleasures of a trip to Stevies or Lake Cochichewick has always been taking stale bread to feed the waterfowl, the environmental and health impacts of this activity for both humans and birds can be serious. While ducks, geese, and swans all love bread, it lacks the nutrients and roughage of their natural diet. Feeding these birds bread is similar to feeding a small child a diet of candy and soda; they may love it, but it does them no good and may cause long-term health problems. Feeding waterfowl also tends to cause the birds to gather in numbers higher than can be supported by the natural food supplies. These large flocks of birds also create large quantities of waste and serious water pollution problems.

Water Facts

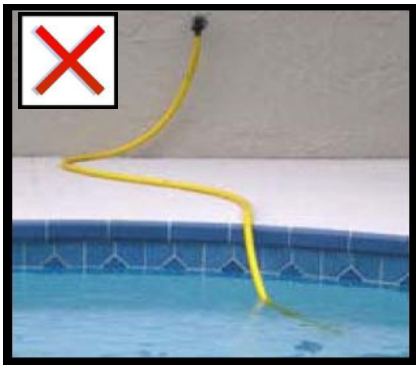
- Water covers 70.9% of the Earth's surface.
- Only 3% of Earth's water is fresh water.
- Only 1% of the fresh water is available for drinking water.
- The human body is 75% water
- Water can dissolve more substances than any other liquid including sulfuric acid.
- More than 25% of bottled water comes from a municipal water supply, the same place that tap water comes from
- Approximately 400 billion gallons of water are used in the United States per day.
- Taking a bath requires up to 70 gallons of water. A five-minute shower uses only 10 to 25 gallons.
- Water is the only substance found on earth naturally in three forms: solid, liquid and gas.



Cross Connections and Backflows

What is a cross connection?

A cross connection is any actual or potential connection between the drinking water lines and potential sources of pollution or contamination such as a piping arrangement or equipment that allows the drinking water to come in contact with non-potable liquids, solids, or gases hazardous to humans in event of a backflow.



What is a backflow?

Backflow is the undesired reverse of the water flow in the drinking water distribution lines. This backward flow of the water can occur when the pressure created by equipment or system such as a boiler or air conditioning system is higher than the water pressure inside the water distribution line (back pressure), or when the pressure in the distribution lines drops due to routine occurrences such as water main breaks or heavy water demand causing the water to flow backward inside the water distribution system (backsiphonage). Backflow is a problem that many water consumers are unaware of, a problem that each and every water customer has a responsibility to help prevent.

Simple steps to prevent cross connection hazards:

- Never submerge a watering hose into a pool, tubs, sink, bucket of soapy water, pet watering containers, drains, or chemicals.
- Always leave an air gap between the hose and the object you are filling.
- Install a hose bib vacuum breaker on every threated water fixture. These can be found atmost hardware stores and are easy to install.

For more information, review the Cross-connection Control Manual from the U.S. EPA's Web site at http://water.epa.gov/nfrastructure/drinkingwater/pws/crossconnectioncontrol/index.cfm. You can also call the Safe Drinking Water Hotline at (800) 426-4791.

Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water.

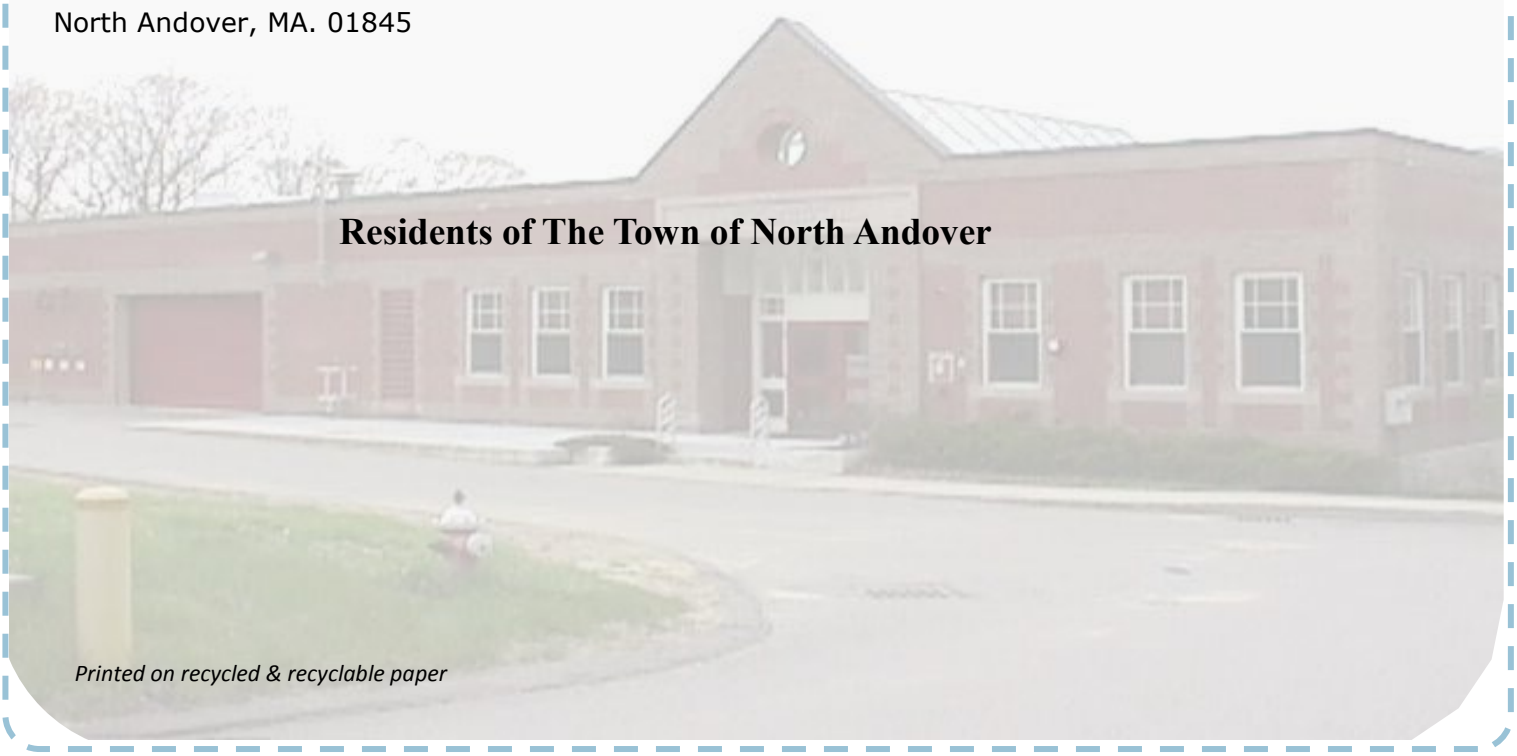
Here are a few tips:

- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets by putting in a few drops of food coloring in the tank. If you have a leak the color will show up in the bowl after a few minutes. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.
- Install water saving shower heads and low-flow faucet aerators
- Insulate your water pipes. You'll get hot water faster plus avoid wasting water while it heats up
- Take shorter showers. A four minute shower use approximately 20—40 gallons of water
- Keep a bottle of drinking water in the fridge. Running tap water to cool it off for drinking water is wasteful. Store drinking water in the fridge in a safe drinking bottle.

Town of North Andover
Water Treatment Plant

420 Great Pond Road

North Andover, MA. 01845



Residents of The Town of North Andover

Printed on recycled & recyclable paper

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/ watrhome) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation and public health. Also, the DEP has a Web site (www. mass.gov/dep) that provides complete and current information on water issues in Massachusetts, including valuable information about our watershed.